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WATER PUMP DEVICE

PUB. NO.: 2002-130306 [JP 2002130306 A]

PUBLISHED: May 09, 2002 (20020509)

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APPL. NO.: 2001-255668 [JP 20011255668]

Division of 2000-183947 [JP 2000183947]

FILED: January 30, 1990 (19900130)

INTL CLASS: F16C-033/78; F01P-005/10; F04D-001/00; F04D-029/04;

F04D-029/08; F16C-033/80; F16J-015/32

ABSTRACT

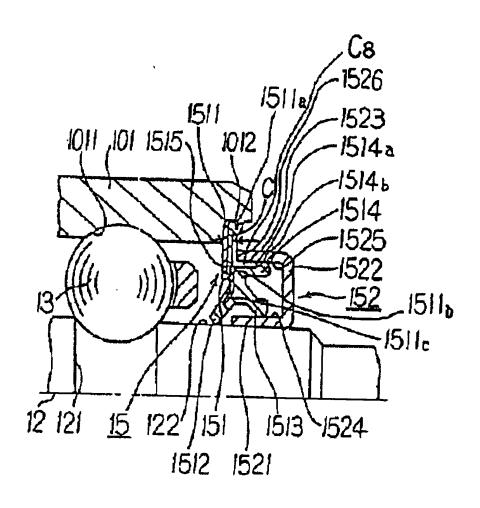
PROBLEM TO BE SOLVED: To provide a **bearing - seal** device for a water pump that almost completely prevents cooling water, water vapor and the like from entering a **bearing**, and prevent the grease in the **bearing** to flow out.

SOLUTION: An impeller-side seal ring includes: a reinforcing ring; a first sub- lip 1512 and a main 1513 each of which is made from an elastic material of rubber, synthetic resin and the like; an outer-ring-side seal ring 151 having a second sub- lip 1514 positioned at the outside of the lip 1513 in the direction of the outside diameter; a first cylinder 1521 fitted and fixed to a shaft; a middle part 1522 outwardly extended to the outside diameter from the first cylinder; and a second cylinder 1523 extended to the direction of the axis in succession to the middle part, and also includes a shaft -side seal ring 152 that rotates in conjunction with the shaft . The main lip 1513 slide-contacts with the external peripheral surface of the first cylinder 1521 of the shaft -side seal ring 152, and the first sub- lip 1512 slide-contacts with the external peripheral surface of a rotating member positioned inside the main lip 1513 in the direction of the axis. Also, the second sub- lip 1514 slide-contacts with the shaft -side seal ring 152 at the outside of the 1513 in the direction of the outside diameter, and a part extended to the direction of the outside diameter of the shaft -side seal ring 152 forms a labyrinth seal between a slide contact of the second sub- lip and the outer-ring-side seal ring 151, or between the contact and an outer ring 101.

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